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&Tractor

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Touching the Future Part 2:

ENGINEERING CONCEPTS

Starts on page 10.

Manufacturers Edition

Quality Circles: How Are They Working?

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Implement &Tractor

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page 36

page 38

19th Engineering Concepts Issue
FACING UP TO CHANGE

10: **Introduction; Meet the Experts.**

11: **What the Experts Foresee.** The thoughts of industry and university authorities on some of the top questions of the '80s.

11: **Looking Back for New Ideas.** Sometimes the newest ideas have been around the longest.

18: **Keeping Pace with Changing Farm Size.** Equipment manufacturers face the challenge of deciding how to serve both the big farmer and the increasing number of smaller growers.

22: **Starving in a Gold Mine.** Associate Editor Scott Nesbitt looks at changes some people envision in the service parts business.

24: **The Ag Engineers Winter Meeting.** The annual event ponders future electronics and the world's climate.

36: **At Last, It's Working!** After three years developing his in-house computer system, a dealer offers some how-not-to advice.

38: **Dear Murph**...One of our staffers claims this is a real memo from a real tractor company. You'll have to make up your own mind.

On the cover...A reprise of our December cover, but this time Walt Disney's EPCOT center gleams in daylight, focusing on the futuristic theme carried forward in this issue.

DEPARTMENTS

I&T Update 2
Editor's Notebook 3
News Briefs 4
Industry in Motion 27
New Literature 27
Auction Prices 28
What's New 30
Classified Ads 46
Index to Advertisers 46
Brown Pages 49

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I&T Update

November Sales: Volume Up on Some Tractor Groups, Down on Others

Tractors under 40 hp and over 140 hp in the two-wheel-drive group and four-wheelers over 200 hp registered substantial gains in retail sales volume, according to the November flash report of the Farm & Industrial Equipment Institute. Other products all showed declines.

By way of comparison, November a year ago was a total bust. Every product category showed substantial declines. Tractors were off 29 per cent from November, 1981; combines were down by half. When 1982 mercifully terminated, tractor sales were down by 26 per cent and combines were down 40 per cent.

Unit Retail Sales

	November			January-November		
	1983	1982	Pct. Change	1983	1982	Pct. Change
Farm Wheel Tractors:						
2-wheel drive						
Under 40 hp	2,933	2,128	+37.8	43,606	40,050	+ 8.9
40-99 hp	2,460	2,581	- 4.7	35,476	38,550	- 8.0
100-139 hp	778	1,202	-35.3	13,674	17,366	-21.3
140 hp and over	1,447	848	+70.6	12,693	9,647	+31.6
Total 2-wheel drive	**7,618**	**6,759**	**+12.7**	**105,449**	**105,613**	**- 0.2**
4-wheel drive						
Under 200 hp	142	146	- 2.7	1,840	2,739	-32.8
Over 200 hp	321	241	+33.2	2,789	3,342	-16.5
Total 4-wheel drive	**463**	**387**	**+19.6**	**4,629**	**6,081**	**-23.9**
Total All Tractors	**8,081**	**7,146**	**+13.1**	**110,078**	**111,694**	**- 1.4**
S-P Combines	1,275	1,727	-26.2	11,647	13,947	-16.5
Balers (200-lb. bales)	224	258	-13.2	8,866	8,664	+ 2.3
Forage Harvesters (shear-bar type)	205	375	-45.3	3,944	4,957	-20.4
Mower-Conditioners	301	381	-21.0	13,833	13,527	+ 2.3

Canadian Sales Outlook Is Up For Most Items

Quick digest of Canadian Farm & Industrial Equipment Institute's 1984 outlook, as delivered at the group's annual meeting in November:

Two-wheel-drive tractors under 40 hp—up 12 per cent to 3,400 units; 40-99-hp tractors—up 12 per cent to 8,175; over-100-hp tractors—up 6 per cent to 6,250. Four-wheel-drive tractors—up 9 per cent to 2,500.

Self-propelled combines—up 3.6 per cent to 3,360 units; pull-type combines—up 2.5 per cent to 1,725 units.

Balers (bales under 200 lbs.)—down 4 per cent to 2,160; balers (bales over 200 lbs.)—up 9 per cent to 2,750; mower-conditioners—up 4 per cent to 2,620 units.

Grain drills—up 6 per cent to 6,020 units.

Western Assn.'s J. Keith Melvin Is Dead at 65

J. Keith Melvin, who was president and executive director of the Western Retail Implement & Hardware Assn., died Dec. 15 in Kansas City, Mo. He was 65.

Melvin, a graduate of Iowa State U., joined the Western Assn. in its accounting operations in 1947. In 1956, he was named as the group's executive director.

In 1962, he co-founded the Western Farm Show, which became one of the leading indoor agricultural equipment exhibitions in the country. He was co-founder and a past president of the North American Farm Show Council.

Melvin is survived by his wife, Jean, and three children. Funeral services were held Dec. 17.

U.S. Farm Equipment Exports Are Hurting

For the first three quarters of 1983, United States exports of farm equipment were down by 22 per cent to $1.519 billion. Most major customers trimmed their purchases; only substantial increases by Saudi Arabia ($245 million, a 150 per cent rise) prevented a more substantial decline.

Our major customer, Canada, cut back imports by 21 per cent to $633 million. Mexico bought 24 per cent less at $28 million. Sales to Venezuela were down by 79 per cent to $11 million. Another major buyer, Australia, cut back 65 per cent, taking $67 million, while South African imports fell 24 per cent to $41 million.

West European buyers of U.S. farm equipment also reduced their activity: United Kingdom, $52 million, down 7 per cent; France, $77 million, down 22 per cent; West Germany, $60 million, off 17 per cent; and Belgium, $40 million, down 29 per cent.

New Contract: Earley, Hesston Settle Lawsuit

Earley Ford Tractor Co., Cameron, Mo., and Hesston Corp. have issued a joint statement that Earley has agreed to become a "choice products" dealer for Hesston. As part of this contractual arrangement, the Earley lawsuit against Hesston has been dismissed.

Choice products dealerships are a part of Hesston's recently announced marketing plan for all of its dealers. Under it, there are now two categories of dealer: "Prime line" will receive "assistance from Hesston in marketing the complete line of Hesston products" and "choice products" dealers will be able "to participate only in limited programs for specific items in the Hesston line."

AUCTION PRICES OF USED EQUIPMENT

An exclusive I&T monthly report of actual prices paid recently at these leading national wholesale auctions.

Asterisk beside tractor price indicates highest bid offered on tractors which were not sold.

ENLOW AUCTION CO.
Tulsa, Okla.
October 22, 1983

ALLIS-CHALMERS TRACTORS
CA, 1953 (Good) 550*
D-14, 1959 (Fair) 1100
185 diesel, 1972 (Good) 6500*

DAVID BROWN TRACTOR
885 diesel, 1969 (Good) 3250

FERGUSON TRACTORS
35, 1957 (Good) 2100
40, 1958 (Rough) 1075

FORD TRACTORS
9N, 1942 (Rough) 725
9N, 1943 (Fair) 975
9N, 1945 (Good) 1200*
9N, 1945 (Good) 1175
9N, 1945 (Fair) 900*
9N, 1946 (Good) 1375*
9N, 1946 (Good) 1400
9N, 1946 (Good) 1475*
8N, 1947 (Rough) 800*
8N, 1948 (Good) 1450
8N, 1948 (Good) 1350*
8N, 1949 (Good) 1520
8N, 1951 (Good) 1375
8N, 1951 (Fair) 900
8N, 1952 (Good) 1580*
8N, 1953 (Good) 1650*
641, 1958 (Good) 2450*
800, 1954 (Fair) 1700*
800, 1955 (Good) 2050
850, 1955 (Good) 2250*
850, Idr., 1956 (Fair) 1750
850, 1956 (Good) 2100
801, 1957 (Good) 2000
851, 1958 (Fair) 1690*
851, 1958 (Good) 2500*
Dexta diesel, 1961 (Fair) 1400*
2000, 1962 (Rough) 1500
2000, backhoe, Idr., 1962 (Fair) 3000
2000 diesel, 1966 (Good) 3300
3000 diesel, 1969 (Good) 3950
3400, Idr., 1966 (Good) 4600
3500, Idr., 1969 (Good) 4900
3600 diesel, 1975 (Good) 6250*
3600 diesel, 1977 (Good) 6500*
4000 diesel, Select-O-Speed, 1968 (Fair) 2250*
5000 diesel, 1965 (Good) 3600
5000 diesel, 1969 (Fair) 3500*
5000 diesel, 1971 (Good) 5200
6000 diesel, 1964 (Good) 1675

CASE TRACTORS
930 diesel, 1961 (Fair) 2500
1090 diesel, cab, 1971 (Good) 6200*
1370 diesel, cab, 1974 (Good) 9500*

MASSEY-FERGUSON TRACTORS
35, 1960 (Good) 2100*
35 diesel, 1961 (Good) 2650
35 diesel, 1961 (Good) 2860
50 diesel, 1958 (Fair) 1850*
50, 1960 (Rough) 1550*
50 diesel, 1962 (Good) 2950
50 diesel, 1963 (Good) 3150
50, 1963 (Good) 2250*
65, 1960 (Fair) 1890*
65, Idr., 1962 (Good) 2650
65, Idr., 1963 (Good) 2300*
165 diesel, 1967 (Fair) 3100*
165 diesel, 1968 (Good) 3625
175, 1969 (Good) 3400*
205, Idr., 1967 (Good) 4450
3165 diesel, Idr., 1968 (Good) 5000
1080 diesel, 1969 (Good) 4250
1080 diesel, 1971 (Good) 4900
255 diesel, 1977 (Good) 6150*
255 diesel, 1978 (Good) 6250
255 diesel, 1978 (Fair) 5500
265 diesel, 1976 (Fair) 5400*
285 diesel, 1976 (Good) 6500
1085 diesel, cab, 1977 (Good) 7500

JOHN DEERE TRACTORS
40, 1954 (Good) 1050*
420, 1957 (Good) 1350*
830 diesel, 1959 (Fair) 850*
3010, 1961 (Rough) 2100
4010, 1961 (Good) 3600
4010 LP, 1963 (Rough) 2500
2830 diesel, 1975 (Good) 5500

KUBOTA TRACTOR
L-285 diesel, 1976 (Good) 2850

INTERNATIONAL HARVESTER TRACTORS
Super-C, 1953 (Good) 1050*
M, 1942 (Fair) 375
M/TA, 1953 (Good) 1750
Cub, mo., 1958 (Good) 1500*
Cub, plow, 1959 (Good) 1150*
W-450, 1956 (Fair) 750*
660, 1960 (Fair) 1100
3444, backhoe, Idr., 1967 (Fair) 4000*
544, 1970 (Good) 4500
674, 1973 (Fair) 2850
674, 1975 (Good) 3850

JONES FARM EQUIPMENT CO.
Dothan, Alabama
November 8, 1983

ALLIS-CHALMERS TRACTORS
7040 diesel, 1976, (Fair) 5100*
B, plow, 1944 (Rough) 325

CASE TRACTORS
1370 diesel, 1975 (Good) 5500*
1175 diesel, 1972 (Fair) 3100*

DAVID BROWN TRACTORS
1200 diesel, 1969 (Good) 2300*
780 diesel, 1969 (Good) 1750*

MASSEY-FERGUSON TRACTORS
2705 diesel, 1979 (Good) 10,200
1105 diesel, 1974 (Good) 4,300
1085 diesel, 1977 (Good) 5950
285 diesel, 1977 (Good) 6100
275 diesel, 1977 (Good) 6900
275 diesel, 1976 (Fair) 5000
265 diesel, 1976 (Fair) 4900*
245 diesel, 1978 (Excellent) 6300*
165 diesel, 1970 (Rough) 2100
165 diesel, 1970 (Excellent) 3700
165 diesel, 1966 (Good) 3000*
165 diesel, 1966 (Good) 3200
165 diesel, 1966 (Fair) 2800*
150 diesel, 1968 (Good) 2900
150 diesel, 1967 (Good) 3450
150 diesel, 1968 (Fair) 2900
135 diesel, Idr., 1973 (Excellent) 4750
135 diesel, 1971 (Excellent) 4350*
135 diesel, 1970 (Good) 3300*
135, 1970 (Good) 3150*
135 diesel, 1970 (Good) 3400*
135 diesel, 1970 (Excellent) 3900
135, 1969 (Good) 3225*
135 diesel, 1969 (Rough) 2000
135 diesel, 1969 (Fair) 2700
135 diesel, 1969 (Fair) 2475
135 diesel, 1969 (Good) 3200*
135, 1968 (Rough) 1700
135 diesel, 1968 (Rough) 1950*
135 diesel, 1968 (Fair) 2700*
135, 1968 (Fair) 2500*
135, 1966 (Good) 3150*
135 diesel, 1966 (Rough) 1900*
35, 1960 (Good) 2200*
35, 1968 (Rough) 1225
35, 1958 (Rough) 1100*
TO30, 1953 (Good) 1400*
TO20, 1952 (Good) 1125
TO20, 1951 (Rough) 650
TO20, 1950 (Good) 1250

FORD TRACTORS
TW30 diesel, 1979 (Good) 18,500*
8600 diesel, 1974 (Rough) 1850
8600 diesel, 1974 (Rough) 2600
8000 diesel, 1969 (Fair) 2900*
6600 diesel, 1978 (Excellent) 7400*
5000 diesel, 1974 (Good) 4000
5000 diesel, 1968 (Fair) 3000*
5000 diesel, 1968 (Fair) 3100
5000 diesel, 1966 (Fair) 3100
5000 diesel, 1966 (Fair) 2950
4000 diesel, 1974 (Fair) 2700
4000 diesel, 1968 (Excellent) 4250
4000, 1968 (Fair) 2900*
4000 diesel, 1966 (Rough) 2500
4000 diesel, 1963 (Fair) 1500
4000 diesel, 1963 (Good) 1950
4000 diesel, 1963 (Fair) 1500
3600 diesel, 1976 (Good) 5350*
3000, 1973 (Good) 3700
3000 diesel, 1973 (Good) 3700*
3000 diesel, 1973 (Good) 3450
3000 diesel, 1973 (Good) 3600*
3000 diesel, 1971 (Good) 3350
3000 diesel, 1970 (Good) 3650*
3000, 1966 (Fair) 2925
2000, 1970 (Good) 3000
2000 diesel, 1963 (Rough) 975
Maj. diesel, 1960 (Fair) 650
Maj. diesel, 1956 (Fair) 750*
Maj. diesel, Idr., 1956 (Rough) 325*
Maj. diesel, 1956 (Fair) 500
Dexta, 1959 (Fair) 1025
821, Idr., 1958 (Fair) 1450
641, 1958 (Excellent) 2300
640, 1955 (Excellent) 2250
Jub., 1953 (Excellent) 2100
8N, 1952 (Good) 1400*
8N, 1952 (Good) 1650
8N, 1951 (Good) 1400
8N, 1951 (Good) 1750
8N, 1950 (Good) 1375
8N, 1950 (Good) 1425
8N, 1950 (Good) 1300*
8N, 1950 (Good) 1400
8N, 1949 (Fair) 1125
8N, (Good) 1350
8N, 1949 (Good) 1250
8N, 1948 (Fair) 1050
8N, 1948 (Rough) 675

INTERNATIONAL HARVESTER TRACTORS
1566 diesel, 1975 (Good) 4400
766 diesel, 1972 (Good) 4400
684 diesel, 1980 (Excellent) 7650
674 diesel, 1976 (Excellent) 4400
656 diesel, 1968 (Rough) 2450
574 diesel, 1974 (Good) 4100*
574 diesel, 1974 (Good) 4000
574 diesel, 1973 (Fair) 3500*
574 diesel, 1973 (Fair) 3400
460, 1959 (Fair) 875
424, 1965 (Good) 1700
424, 1965 (Good) 2050
424 diesel, 1964 (Good) 2050
414, Idr., 1963 (Rough) 950
414, 1963 (Fair) 950
414 diesel, 1963 (Fair) 900
230, plow, mo, 1957 (Fair) 1050*
M, 1942 (Rough) 275*
Sup. A, 1948 (Good) 1010
140, 1960 (Fair) 1150*
A, 1945 (Good) 725*
154, Loboy, mo, 1970 (Fair) 1400
Cub, 1948 (Fair) 750*
Cub, mo, 1948 (Good) 1175

JOHN DEERE TRACTORS
4620 diesel, duals, 1971 (Fair) 5700
4430 diesel, cab, 1976 (Good) 10,750*
4430 diesel, duals, 1975 (Excellent) 11,800*
4430 diesel, 1973 (Fair) 8500*
4430 diesel, 1973 (Fair) 8100*
4320 diesel, 1972 (Excellent) 7000*
4230 diesel, 1974 (Fair) 6200
4230 diesel, 1973 (Excellent) 12,500*
4030 diesel, 1975 (Good) 8400*
4020 diesel, 1966 (Fair) 3750*
4010 diesel, 1962 (Fair) 3200
3020 diesel, 1967 (Fair) 3700
3010 diesel, 1962 (Rough) 1400
2840 diesel, 1979 (Excellent) 9850
2630 diesel, 1975 (Good) 5100*
2040 diesel, 1979 (Excellent) 6600*
2040 diesel, 1979 (Excellent) 6500*
2030 diesel, 1974 (Good) 4100*
2030 diesel, 1974 (Excellent) 4600*
2020 diesel, 1969 (Good) 4100*
2020 diesel, 1966 (Good) 3900*
2010 diesel, 1961 (Good) 1600
1120 diesel, (Good) 2500
1020 diesel, 1972 (Good) 3400*
850 diesel, 1979 (Good) 4800*
830 diesel, 1974 (Good) 3600
50, 1953 (Good) 700

SATOH TRACTOR
Stallion, mo., (Good) 3250

KUBOTA TRACTORS
L245 diesel, mo, 1978 (Good) 2700
L245 diesel, mo, 1978 (Good) 2850

LONG TRACTORS
460 diesel, (Fair) 1600
445 diesel, (Fair) 2250*
384 diesel, (Rough) 1450
380 diesel, (Good) 3000

MINNEAPOLIS-MOLINE TRACTOR
Jet Star, 1961 (Rough) 500

OLIVER TRACTORS
2-105 diesel, 1976 (Good) 7000*
88 diesel, 1954 (Rough) 475

YODER & FREY, INC.
Archbold, Ohio
November 8, 1983

INTERNATIONAL HARVESTER TRACTORS
C, 1948 (Rough) 750*
H, 1949 (Fair) 510
H, 1946 (Fair) 640

H, Idr., 1950 (Fair) 770
H, 1950 (Fair) 590
H, 1949 (Rough) 540
H, 1949 (Fair) 550
M, 1950 (Rough) 650*
M, 1948 (Good) 685
M, 1943 (Good) 525*
M, 1947 (Rough) 600*
Sup. M, 1953 (Rough) 800*
Sup. A, 1953 (Fair) 1475
300, 1956 (Fair) 650*
B, cult., 1947 (Fair) 500*
400, 1957 (Rough) 625
400 diesel, 1958 (Fair) 850
460 diesel, 1959 (Fair) 1650*
504, ... 950
560, 1960 (Good) 2000
560, 1959 (Rough) 1550
560, 1960 (Fair) 1750
560 Idr., 1961 (Fair) 2200
544 diesel, (Fair) 4000
574, Idr., 1973 (Fair) 5100*
656, 1968 (Good) 4000*
686 diesel, 1978 (Good) 9250
706, 1967 (Rough) 1900
706, 1964 (Rough) 1500
756, 1967 (Rough) 1750
756, 1969 (Good) 3350
806 diesel, 1964 (Fair) 3700*
806, 1965 (Fair) 2900
806 diesel, 1965 (Fair) 4100*
966 diesel, 1975 (Good) 7000*
966 diesel, 1974 (Good) 7000*
1026, 1970 (Fair) 6150
1066 diesel, 1976 (Good) 7100*
1066 diesel, 1975 (Good) 8400*
1066, 1975 (Fair) 7750*
1066, 1973 (Fair) 5300*
1066, 1953 (Fair) 5800*
1066, 1979 (Good) 12,800
1206, 1965 (Fair) 4150
1206 diesel, 1965 (Rough) 5000*
1206 diesel, 1964 (Rough) 3800*
1206, 1965 (Fair) 5000*
1466 diesel, 1976 (Good) 9200*
1466, 1972 (Good) 8900
1568, 1975 (Good) 7700*
1586, 1979 (Good) 8500*
3588, 1980 (Good) 22,250*
5088, (New) 26,000*
4166, 1975 (Rough) 7500*

COCKSHUTT TRACTOR

E-4, ... 350

ALLIS-CHALMERS TRACTORS

C, ... 300
WC, ... 240
WD-45, 1952 (Rough) 575*
WD-45, 1951 (Rough) 500
WD-45, 1952 (Rough) 850
D-12, 1966 (Fair) 1000*
D-14, 1963 (Rough) 900
D-15, Idr., 1967 (Good) 2500
D-19, 1967 (Fair) 1750
D-21 diesel, 1967 (Fair) 3700*
190XT, 1970 (Fair) 2850
7030, 1974 (Good) 7350*
7045, 1982 (Excellent) 16,000
7050, 1975 (Good) 8000*
7050, 1975 (Fair) 6500*
730, 1974 (Good) 7000*

JOHN DEERE TRACTORS

A, 1945 (Rough) 475*
A, 1950 (Good) 600*
MT, cult., 1948 (Fair) 700*
MT, 1950 (Fair) 625*
420 dozer, ... 1875
520, 1958 (Fair) 1450*
720, 1956 (Rough) 1000*
950 diesel, 1980 (Excellent) 4500*
2010, 1962 (Fair) 1700*
2020 diesel, (Rough) 2500*
2020, (Fair) 3850*
2030 diesel, 1974 (Good) 6000
3010 diesel, 1964 (Fair) 2800
3020, 1968 (Good) 4000
4010 diesel, 1963 (Fair) 4650*
4020 diesel, 1966 (Fair) 6600*
4020 diesel, 1965 (Fair) 4600*
4020, 1965 (Fair) 3300*
4020, 1967 (Fair) 5700
4020, 1966 (Rough) 2850*
4020, 1972 (Good) 7000*
4020, 1977 (Good) 13,500*
4040, 1965 (Rough) 3200*
4030 diesel, 1976 (Fair) 7100*
4430, 1975 (Good) 9950

OLIVER TRACTORS

550, 1962 (Fair) 1850
880 diesel, 1960 (Rough) 1400
1650, 1967 (Rough) 2600*
1850, 1966 (Fair) 3200*
1850, 1966 (Fair) 3400*
1950, 1969 (Fair) 3925
1955, (Good) 5400
2255 diesel, 1974 (Fair) 6750*

CASE TRACTORS

300, 1956 (Rough) 800
500, 1957 (Rough) 900*
430, 1965 (Fair) 1150*
480B, Idr., ... 4400
800, Idr., 1964 (Fair) 1330
730, 1965 (Fair) 750*
730 diesel, 1967 (Fair) 2000*
830, 1967 (Fair) 1750*
830 diesel, 1965 (Rough) 1800*
830, (Rough) 750*
830, 1965 (Rough) 975
880, (Fair) 4600*
930 diesel, 1968 (Fair) 1900*
930, 1966 (Fair) 1100
1030 diesel, 1966 (Rough) 2700*
1070 diesel, 1972 (Rough) 3575
1370, ... 8600
1370, 1976 (Rough) 6900*
1470, (Fair) 8300*
2470, (Fair) 8500*

MINNEAPOLIS-MOLINE TRACTORS

Jet Star, (Fair) 1000*
M-670, 1965 (Fair) 1200
G-900, 1967 (Fair) 2025

DAVID BROWN TRACTORS

1200 diesel, 1972 (Fair) 2700*
1200 diesel, 1975 (Fair) 2750*
990, (Rough) 1800*

FORD TRACTORS

8N, 1943 (Fair) 1050
9N, 1942 (Rough) 875*
9N, 1943 (Fair) 1125
600, 1955 (Fair) 1725
600, 1956 (Good) 2050*
2000 diesel, 1970 (Fair) 3000*
3000 diesel, 1968 (Rough) 2750*
4000, 1970 (Rough) 2850
4000 diesel, 1973 (Good) 4850
5000, 1971 (Fair) 2800*
5000, 1974 (Good) 6150
6000, 1961 (Rough) 1250*
4600 diesel, 1978 (Excellent) 7000
TW-30, 1981 (Good) 21,000*

FERGUSON & MASSEY-FERGUSON TRACTORS

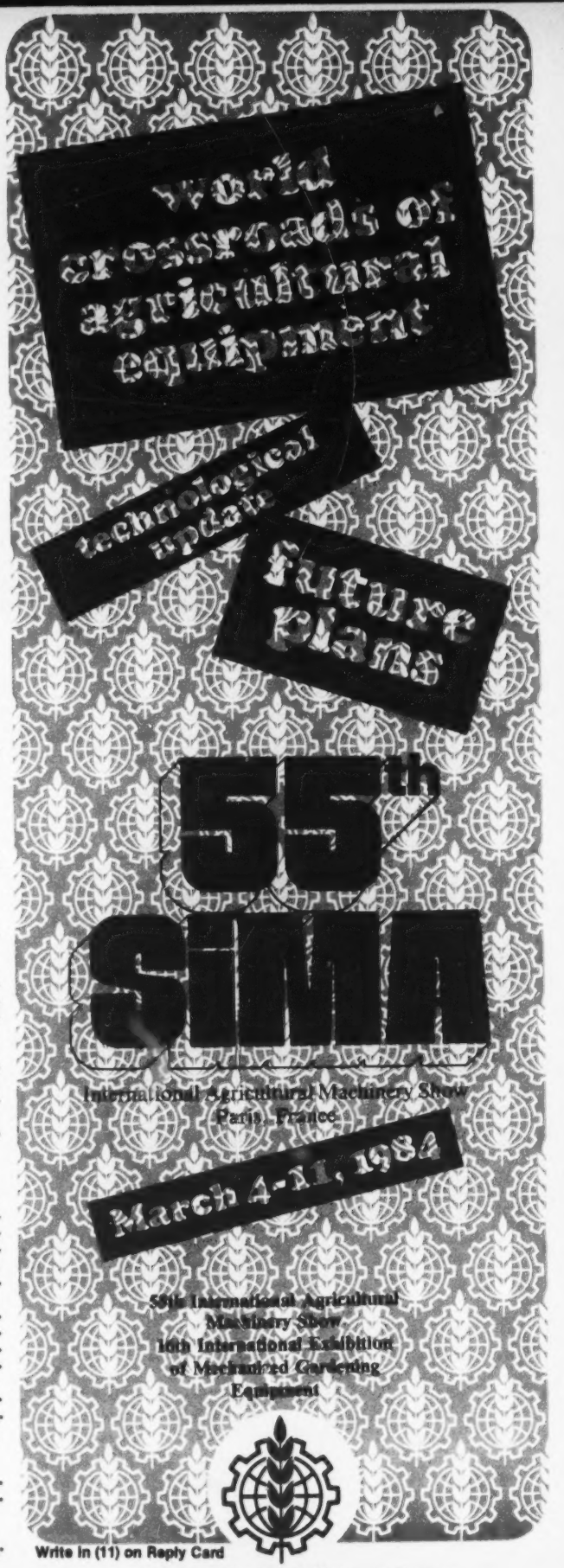
20, ... 560
20, 1943 (Rough) 680*
30, 1950 (Rough) 950*
50, 1960 (Rough) 1750*
50, (Rough) 1075
135, 1969 (Fair) 3850*
135, 1965 (Fair) 4350
165 diesel, 1970 (Rough) 2750*
165, 1968 (Rough) 2900*
165 diesel, 1970 (Good) 3825*
180, 1969 (Good) 3800*
180 diesel, 1970 (Fair) 2850
1080 diesel, 1971 (Fair) 3400*
1085 diesel, 1977 (Rough) 4750*
1135, 1974 (Rough) 4950

WHITE TRACTORS

4-150, 1975 (Rough) 8000*
1270 diesel, (Fair) 3500*

MASSEY-HARRIS TRACTOR

44 diesel, 1948 (Fair) 475*



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February 1984

TWO DOLLARS

Implement & Tractor

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KING WINTER WORK

page 24

Manufacturers Edition

Future Farm Technology

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INTERTEC PUBLISHING CORP.

Implement & Tractor

The business magazine of the farm and industrial equipment industry
February 1984 • Vol. 99 • No. 3

8: The Big Forecast of 1984-85. Manufacturers see better unit sales for 1984 in almost all product groups, with strength continuing into 1985.

13: Some New Work for Ex-Dealers. Some thoughts by Scott Nesbitt, I&T managing editor, on using talent that's going to waste.

14: I&T Job Match. A special offer to match talented but unemployed people with jobs that need to be filled.

16: The Southwest Connection. Nearly 6 of 10 dealers are using computers, according to a survey taken in Texas, Oklahoma and New Mexico.

20: Marketing Your Product Support Services. Beware the Maytag Syndrome!

24: Making Winter Work. Good promotion and a little gambling have paid off in lots of winter work for Underwood Equipment.

28: Plugging in to Automotive Technology. Electronic controls for engines, power trains.

39: New Hitch, Tractors, for Deutz in '84. Upgrading the other green line, including a front hitch option.

42: Parts Marketer's Ideas on Countering Competition. Make your customers say "If they don't have it, nobody else will."

44: MF's 3500 Series: Electronic Hitch Control. Three new tractors introduced by Massey-Ferguson.

On the cover... Mechanic Byron Harms tackles an off-season valve adjustment at Underwood Equipment in Ottawa, Kan.

DEPARTMENTS

I&T Update 2
Editor's Notebook 3
Auction Prices 4
News Briefs 19
What's New 22
Farm Equipment Patents 27
Industry in Motion 40
New Literature 41
Classified Ads 45
Index to Advertisers 45
Brown Pages 46

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I&T Update

December's Big Chill Also Bit Into Retail Sales of Farm Equipment

Like the thermometers across the U.S. in the month of December, farm equipment retail sales declined, according to the flash report of the Farm & Industrial Equipment Institute.

The year wound up with minus signs in most product categories. The exceptions were tractors under 40 horsepower and over 140 horsepower, balers and mower-conditioners. Manufacturers had been generally anticipating a substantial sales increase in the fourth quarter that didn't materialize.

Unit Retail Sales

	December			January-December		
	1983	1982	Pct. Change	1983	1982	Pct. Change
Farm Wheel Tractors:						
2-wheel drive						
Under 40 hp	2,032	1,917	+ 6.0	45,610	41,967	+ 8.7
40-99 hp	2,557	2,584	- 1.0	38,096	41,134	- 7.4
100-139 hp	850	1,345	-36.8	14,494	18,711	-22.5
140 hp and over	935	889	+ 5.2	13,652	10,536	+29.6
Total 2-wheel drive	**6,374**	**6,735**	**- 5.4**	**111,852**	**112,348**	**- 0.4**
4-wheel drive						
Under 200 hp	187	282	-33.7	2,029	3,021	-32.8
Over 200 hp	240	400	-40.0	3,023	3,742	-19.2
Total 4-wheel drive	**427**	**682**	**-37.4**	**5,052**	**6,763**	**-25.3**
Total All Tractors	**6,801**	**7,417**	**- 8.3**	**116,904**	**119,111**	**- 1.9**
S-P Combines	1,210	2,258	-46.4	12,758	16,205	- 21.3
Balers (200-lb. bales)	173	241	-28.2	9,039	8,905	+ 1.5
Forage Harvesters (shear-bar type)	130	188	-30.9	4,074	5,145	-20.8
Mower-Conditioners	427	454	- 5.9	14,261	13,981	+ 2.0

Canadian Retail Sales for 1983 Also Fell Off

In Canada, according to the Canadian Farm & Industrial Equipment Institute, 1983 retail sales of farm tractors over 40 horsepower were down 15 per cent from the prior year at 15,363 units. Other end-of-year data:

Mower-conditioners, down 2 per cent at 2,592; square balers, down 13 per cent at 2,000; round balers, up 1 per cent at 2,421; forage harvesters, down 11 per cent at 700; pull-type combines, down 19 per cent at 1,472; self-propelled combines, down 18 per cent at 2,922; pull-type swathers, down 33 per cent at 2,453; self-propelled swathers, down 24 per cent at 2,419.

Briefly...

Jeffrey H. Flora is new president and treasurer of the Western Retail Implement & Hardware Assn., succeeding J. Keith Melvin who died Dec. 15.

LeRoy F. Barry, who managed the Mid-West Farm Equipment Dealers Assn. for 28 years until its merger with the Iowa Retail Farm Equipment Assn., died Dec. 23, 1983, in Omaha, Neb. For three years after the merger, Barry served as legislative representative for the Iowa-Nebraska Farm Equipment Assn.

The FIEI reports it is monitoring a trend in state legislatures to enact "lemon car" laws, which would require the manufacturer to buy back or replace a new car if a defect that impairs its use, safety or value is not fixed after four or more attempts. FIEI adds that "this trend (is) carrying over to self-propelled farm equipment in Minnesota and Nebraska."

Mitchell I. Quain, C.F.A. for Prudential-Bache, likes the near-term outlook for farm equipment, looking for a 10 to 20 per cent improvement in the industry (but with manufacturers' shipments running less than that). For the long haul, Quain sees the industry as unattractive: "With the farmer no longer replacing labor, this industry should continue to show below-average growth." Stocks mentioned as "attractive": Deere and Steiger.

Direct government payments to farmers in fiscal 1983 came to a near-record $3.898 billion, according to the USDA. In addition, the value of PIK payments is seen at $9.4 billion and the cost of the dairy program $2.5 billion. Farm exports were worth $34.8 billion in fiscal 1983, off 11 per cent from 1982 and 21 per cent from the record $43.8 billion in 1981.

A study of equipment ownership costs by Oklahoma State U. researchers shows that costs of tilling can vary widely by soil types. Average cost per acre for tilling nine clay loam soils was $55.82 while the cost for machinery combinations to till nine variations of sandy loam soils was $40.18 per acre.

Deere's China Sale: $25 Million

The People's Republic of China has awarded contracts to Deere & Co. for approximately $25 million in equipment for a mechanization project. Financing will be provided by the World Bank.

Equipment includes 400 large tractors from Waterloo, 100 combines from Germany, 500 grain drills, 60 planters, 200 cultivators, rippers and spare parts.

Deere also has signed a contract with the PRC to sell it the technology for the manufacture of several farm tractor models. One will be a 150-hp model, the others ranging from 39 to 82 hp.

Most of the 25 million order is due in 1984.

Agro-China '84 Show Is Set

Agro-China '84, billed as a showcase of machinery, equipment, tools, services and technologies for the specific needs of China's agricultural modernization, will be held Nov. 19-24, 1984, at the Foreign Trade Center in Guangzhou (formerly Canton).

The exposition is being organized by AVP Expositions Co. of Hong Kong with the China Guangzhou Scientific and Technical Exchange Center with Foreign Countries. AVP's representative for the Western Hemisphere is Harry C. Lepinske of American Exhibition Services International Inc., Chicago, Ill.

At White Farm: Hays, Peterson Get New Posts

White Farm Equipment Co., Oak Brook, Ill., has named Donald L. Hays, 49, as its vice-president for sales and marketing. John T. Peterson, 32, is new director of marketing operations.

Hays, now responsible for sales of all White products worldwide, succeeds Carl McNair, who recently resigned. Previously, he headed parts sales and distribution operations. Peterson was previously White's director of market development.

Editor's Notebook
(continued)

It's More Pleasant Listening to Each Other, But It's Risky, Too

On the *I&T Update* page, you probably noticed the December flash report from the FIEI on retail sales. For the most part, 1983 was a very forgettable year. Yes, there are some plus signs in that table, but except for the small tractors from Japan, I judge most of them to be (a) indicators that the same month the year before was even worse, or (b) blips that signify some special efforts at inventory unloading.

I think the whole thing would sit better with me if I could forget all the optimistic things that were said in earlier parts of this year by the experts. Also, the optimistic things said by non-experts, certainly including me.

Typical of the sort of things I'm talking about: "Bankers are telling their farmers that now's the best time ever to upgrade their equipment; prices will never be cheaper!" Well, if that's what bankers were telling farmers, the farmers weren't listening.

Maybe instead of listening, they were looking. I suspect that they were looking at vast oceans of new and used equipment on dealers' lots. And since farmers are pretty good at counting, they must have been aware that the equipment glut was continuing. Never a better time to buy?

I do think that farmers were listening to their bankers, but I think the bankers were telling them it was time to use that PIK money to settle up...and avoid getting overextended again on machinery payments.

Another thing we optimists were fond of hearing and saying: "Farmers have just about worn out their equipment. They'll be looking for something to depreciate as 1983 moves along."

But maybe some of that equipment they have is as good and reliable as we've been claiming it is! Maybe farmers decided that since profits weren't going to be so good anyway, and their equipment could still do the job, they could wait to take advantage of investment tax credits some other year.

There I go again, acting like I know what farmers think and do. Actually, I now feel that I don't know a damned thing about this subject. In my case, it's excusable because that's not what I get paid to do.

The real question is, does *anybody* have a real understanding of what farmers are going to do under a given set of circumstances? There are supposed to be research specialists available to this industry who can tell us everything about what farmers feel, think, like, hate, want, dislike, prefer—and intend to do. And indeed, perhaps they're out there doing their job with methods that are right on target.

If they are, maybe the people who should be listening to them, aren't. Sometimes it's easier to listen to the upbeat word, even when that might lead one away from what's realistic and must be considered.

If there are any of these experts out there, will they please contact me and tell me the inside story about what farmers are going to do, given a set of circumstances? Better yet, will they please tell the farm equipment people who need to know in the worst way?

I&T SINCE 1886

AUCTION PRICES OF USED EQUIPMENT

An exclusive I&T monthly report of actual prices paid recently at these leading national wholesale auctions.

Asterisk beside tractor price indicates highest bid offered on tractors which were not sold.

YODER & FREY, INC.
Archbold, Ohio
December 13, 1983

INTERNATIONAL HARVESTER TRACTORS

B, 1958 (Rough) 275*
B, cult., ... 500
A, 1947 (Rough) 550
Cub, cult., 1951 (Fair) 1000
Cub, cult., 1954 (Rough) 1000
Cub, plow, cult., mo., (Fair) 1400*
Cub, 1953 (Fair) 1475
Cub, 1947 (Rough) 700
Super A, cult., 1952 (Fair) 1550
H, ldr., 1950 (Rough) 575
H, 1951 (Rough) 650
M, 1951 (Rough) 875
M, ... 1050
M, 1950 (Rough) 500
M, 1950 (Rough) 600*
M, 1950 (Rough) 780
M, 1950 (Rough) 575
M, 1948 (Fair) 775*
M, 1952 (Rough) 810*
M, 1952 (Fair) 750
M, 1950 (Fair) 800
Sup. M, 1953 (Good) 900
Sup. M, 1952 (Fair) 1100
Sup. M, 1950 (Rough) 500
W30, ... 750
140, 1960 (Fair) 1650
300, 1958 (Good) 1225
300, 1955 (Fair) 800*
300 bld., 1957 (Rough) 1500
400, 1955 (Fair) 925*
400 diesel, 1956 (Rough) 575*
434 diesel, 1967 (Rough) 2175
450, 1957 (Rough) 725*
504, 1965 (Fair) 2050
504, 1966 (Fair) 1900*
560, 1960 (Rough) 1800*
560, 1960 (Rough) 1500*
560, 1960 (Rough) 1350
560 LP, 1961 (Rough) 950*
560, 1961 (Rough) 1550
560, 1960 (Fair) 2000
574, 1973 (Fair) 4250*
660 diesel, 1961 (Rough) 1375
666, 1975 (Good) 3600*
706, 1962 (Rough) 2200*
706, 1964 (Rough) 1800*
706, 1963 (Good) 2250
706, 1964 (Good) 3000
706 diesel, 1966 (Fair) 2900
706 diesel, 1965 (Rough) 2850*
706, 1967 (Fair) 2700*
706, 1965 (Good) 3425
706 diesel, 1964 (Rough) 2800*
706, 1966 (Good) 3050*
806, 1967 (Fair) 3400
806 diesel, 1964 (Rough) 3000*
806 diesel, 1967 (Good) 3400*
806 diesel, 1967 (Good) 4500*
806 diesel, 1966 (Fair) 4150
806, 1963 (Fair) 3000*
806, 1965 (Rough) 2050
806 diesel, 1966 (Rough) 3500*
806 diesel, 1964 (Rough) 4450
806 diesel, 1966 (Fair) 4100*
826 diesel, 1970 (Good) 5900
856 diesel, 1968 (Good) 5800
856, 1968 (Good) 6600
856 diesel, 1970 (Good) 6100*
886 diesel, 1979 (Excellent) 11,450
966, 1976 (Rough) 5825
966, 1974 (Fair) 5400
986, 1979 (Excellent) 12,750*
1066 diesel, 1973 (Fair) 7800
1066, 1973 (Fair) 6300*
1066 diesel, 1976 (Fair) 9000*
1066, 1975 (Fair) 7800
1066, 1975 (Fair) 5800*
1066, 1976 (Good) 6600
1066, 1973 (Fair) 8500*
1086, ... 12,700
1086, ... 12,550
1086, 1980 (Good) 12,000*
1206 diesel, 1967 (Fair) 5000*
1206 diesel, 1965 (Good) 5900*
1256 diesel, 1969 (Fair) 5400*
1456, 1967 (Good) 5500*
1456, 1969 (Fair) 5800
1466 diesel, 1974 (Good) 7000
1466 diesel, 1975 (Good) 8250
1486, 1975 (Fair) 7600
1566 diesel, 1974 (Good) 8800*
1586, 1979 (Fair) 10,750*
H-86, 1978 (Good) 7500

CASE TRACTORS

400, 1956 (Rough) 600*
400, 1957 (Rough) 650*
400, 1956 (Fair) 850*
580B, ldr., ... 5700
680, hoe & ldr., ... 5625
730 diesel, 1967 (Good) 2200*
830 diesel, 1966 (Fair) 1000*
970 diesel, cab, 1971 (Good) 5400*
1030 diesel, 1972 (Rough) 4250*
1030 diesel, 1966 (Rough) 2500*
1270, 1970 (Fair) 7300
1370, 1977 (Fair) 7200*
1370, 1976 (Rough) 6000*
1470, (Rough) 7200*
2090, 1980 (Good) 15,500*
2470 diesel, 1975 (Rough) 8100
2470, (Rough) 8900*

COCKSHUTT TRACTOR

1650 diesel, 1965 (Fair) 2800

DEUTZ TRACTOR

D10006, (Fair) 5000*

JOHN DEERE TRACTORS

A, bld., 1945 (Fair) 525*
A, 1942 (Rough) 675
B, cult., 1947 (Fair) 400*
D, ... 1800
MT, cult., 1952 (Rough) 775*
310 hoe & ldr., ... 11,600
720 diesel, 1957 (Rough) 1050*
60, 1954 (Rough) 850
70, 1954 (Fair) 725*
70 diesel, ... 450
50, 1954 (Fair) 1150
520, 1958 (Fair) 1225
720, ... 475

720, 1957 (Rough) 1300*
720 diesel, 1957 (Fair) 1700
720 diesel, 1957 (Fair) 1750
720 diesel, 1958 (Fair) 1550
730, 1958 (Good) 2300*
730, 1958 (Good) 925
730-A, diesel, 1958 (Good) 3150
820 diesel, 1956 (Fair) 2800
950, 1978 (Good) 4800*
1010, 1962 (Rough) 1900*
2010, Idr., 1961 (Rough) 1950
2010, 1960 (Good) 1750
2010, 1963 (Fair) 1850
2010, 1963 (Fair) 1650
2010, 1962 (Rough) 2450
2840, 1978 (Excellent) 8800*
3010, 1962 (Fair) 3250*
3010 diesel, 1963 (Fair) 3950*
3010 diesel, 1961 (Fair) 3250
3020, 1970 (Fair) 4700*
4010 diesel, 1963 (Fair) 4675
4010 diesel, 1962 (Good) 4600
4010, 1963 (Fair) 3050
4010, 1965 (Rough) 3500
4020 diesel, 1965 (Fair) 4925
4020 diesel, 1966 (Good) 6450
4020 diesel, 1967 (Fair) 5900
4020 diesel, 1967 (Fair) 3000
4020, 1964 (Rough) 3400*
4020, 1965 (Good) 6550
4020 diesel, 1965 (Fair) 5050*
4020 diesel, 1967 (Fair) 5950
4020 diesel, 1965 (Good) 6250*
4020 diesel, 1965 (Fair) 5625
4230 diesel, 1976 (Excellent) 12,750
4230, 1974 (Fair) 10,800
4230, 1976 (Fair) 11,500*
4430 diesel, 1975 (Good) 9700*
4430, 1977 (Good) 12,100
4430 diesel, 1976 (Rough) 9000*
4430, 1976 (Fair) 12,000
4620, 1969 (Good) 6000
4620, 1970 (Good) 7100*
4620, 1969 (Rough) 6000*
4630, 1977 (Good) 8800
5020, 1969 (Rough) 5000*
8630, 1976 (Fair) 18,150

ALLIS-CHALMERS TRACTORS

WD diesel 325
WD-45, 1954 (Good) 800
WD-45, 1947 (Rough) 600*
WD-14, 1965 (Rough) 1050*
WD-14, 1963 (Rough) 1400*
D-15, 1964 (Fair) 2200
D-17, 1963 (Fair) 1300*
D-19, ... 1050
D-19, 1965 (Good) 2200
D-21, 1967 (Rough) 3100*
D-21, 1967 (Fair) 4250*
190XT, 1970 (Good) 5000
200, 1973 (Good) 6225
210, 1971 (Fair) 4800*
7040, 1976 (Good) 7800*
7050, 1974 (Rough) 6325

MASSEY-HARRIS TRACTOR

44 diesel, (Fair) 600

FORD TRACTORS

8N, 1948 (Rough) 900
8N, 1950 (Rough) 1025
8N, 1948 (Rough) 675
8N, 1952 (Fair) 1300
8N, Idr., 1948 (Fair) 1125*
8N, 1951 (Good) 1500*
9N, 1941 (Fair) 625
9N, 1943 (Rough) 990
9N, 1942 (Rough) 890
9N, 1940 (Rough) 525
641, Idr., 1956 (Rough) 1800
806, 1955 (Good) 2450
641, 1956 (Fair) 2100*
800, Idr., 1955 (Rough) 1900*
2000, 1966 (Fair) 2750*
2000 diesel, 1974 (Good) 3000*
2000, 1962 (Rough) 1650*
3000 diesel, 1970 (Fair) 3400
3000, 1969 (Rough) 1850
3000 diesel, 1968 (Fair) 2800*
3000, 1969 (Fair) 3000*
3500, Idr., 1969 (Rough) 3700*
4000 diesel, 1975 (Good) 5225
4000 Select-O-Speed, 1967 (Rough) 1500*
4000 diesel, 1971 (Good) 4550
4000, Select-O-Speed, 1962 (Fair) 1100*
4000, (Rough) 800
4000, 1971 (Fair) 3850
4000, 1971 (Rough) 2250*
5000 diesel, 1975 (Good) 6250
5100 diesel, 1961 (Fair) 850
6000, 1960 (Rough) 850
6000 diesel, (New) 9750*
6000, 1960 (Rough) 1150*
7000 diesel, 1975 (Good) 6800
7000 diesel, 1977 (Good) 7050
8600, 1974 (Excellent) 6600*
9600 diesel, 1974 (Fair) 7000*
4600 diesel, 1980 (Good) 7500*
TW-30, 1981 (Excellent) 21,500*
Jub., 1953 (Fair) 1600*
Jub., 1953 (Rough) 1600

FERGUSON & MASSEY FERGUSON TRACTORS

TE-20, 1950 (Fair) 950
30, 1952 (Fair) 875
30, 1952 (Rough) 1350
30, (Rough) 2225
50, 1960 (Rough) 1600*
65, 1960 (Rough) 1600
65, 1963 (Rough) 1700*
65, 1962 (Rough) 1350
65, 1960 (Good) 2650
165 diesel, 1967 (Fair) 2850*
165, 1969 (Good) 2800*
175, 1970 (Good) 4600*
202, Idr., ... 2350
245, 1978 (Fair) 4200*
1135 diesel, (Fair) 6500*
1155, (Rough) 5100*
2805, 1978 (Fair) 9500

WHITE TRACTORS

2-105, 1977 (Fair) 8150
2-135, (Fair) 13,100

OLIVER TRACTORS

1600, 1961 (Fair) 2100*
1650, 1966 (Rough) 1900*
1650 diesel, 1963 (Fair) 3950
1650, 1965 (Fair) 2300
1750, 1966 (Good) 3550*
1750 diesel, 1965 (Fair) 4200*
1800, 1961 (Rough) 2150*
1800, 1961 (Fair) 2100*
1850, 1965 (Fair) 2850
1850 diesel, 1967 (Fair) 4500
1850 diesel, 1965 (Fair) 4250*
1850, 1964 (Fair) 2600*
1855 diesel, 1967 (Good) 6600*

DAVID BROWN TRACTORS

990, 1968 (Good) 2800
990, 1974 (Fair) 1650
1200 diesel, 1972 (Fair) 2800

MINNEAPOLIS-MOLINE TRACTORS

M-302, (Fair) 2000*
M-670, 1967 (Rough) 1125

JONES FARM EQUIPMENT CO.
Dothan, Alabama
December 13, 1983

ALLIS-CHALMERS TRACTORS

7060 diesel, cab, duals, 1976 (Good) 10,750*
WD, 1948 (Rough) 350
CA, 1957 (Rough) 225

CASE TRACTORS

1175 diesel, 1973 (Fair) 3500
1170 diesel, 1970 (Good) 5500
1070 diesel, 1972 (Rough) 2600*
1030 diesel, 1969 (Rough) 3000

DAVID BROWN TRACTORS

990 diesel, 1966 (Fair) 750
950 diesel, (Fair) 1050

MASSEY-FERGUSON TRACTORS

1085 diesel, 1977 (Fair) 4300*
275 diesel, cab, 1976 (Good) 5650
255 diesel, 1976 5750
255 diesel, 1976 (Good) 5450
255 diesel, 1976 (Fair) 4500*
185 diesel, 1972 (Good) 3400
175 diesel, 1973 (Good) 3450*
165 diesel, 1971 (Fair) 2750*
165 diesel, 1968 (Rough) 2450
165 diesel, 1968 (Fair) 3100
165 diesel, 1966 (Fair) 3200*
150 diesel, 1971 (Good) 3500
150 diesel, 1972 (Rough) 2100
135, 1973 (Good) 3375
135 diesel, 1975 (Fair) 2475*
135 diesel, 1975 (Good) 2850*
135, 1971 (Excellent) 3700*
135 diesel, 1967 (Excellent) 3800
135 diesel, 1967 (Good) 3400*
135 diesel, 1967 (Good) 3300
135, 1966 (Good) 3000
135 diesel, (Good) 3100*
135 diesel, 1966 (Fair) 2650
135 diesel, 1966 (Good) 3200*
135 diesel, 1966 (Rough) 1850*
135 diesel, 1966 (Rough) 2250
135 diesel, 1966 (Rough) 2600
35, cab, 1963 (Fair) 1200
35, 1962 (Excellent) 2450
35 diesel, 1962 (Fair) 975
35 diesel, 1958 (Rough) 775
35, 1958 (Good) 2000
35, (Good) 1700
35, (Good) 2000*
T030, (Rough) 600*
T030, (Good) 1550
T030, (Rough) 750*

FORD-FERGUSON TRACTORS

9N, 1946 (Good) 1075
9N, 1946 (Good) 1250

FORD TRACTORS

8700 diesel, cab, duals, 1977 (Excellent) 10,700*
7700 diesel, cab, 1977 (Excellent) 16,000
7000 diesel, 1972 (Good) 4600
6000 diesel, 1962 (Fair) 900*
5000 diesel, 1975 (Excellent) 5350
5000 diesel, 1968 (Good) 3700*
5000 diesel, 1968 (Good) 4100
4000, 1962 (Rough) 975*
3610 diesel, (Excellent) 7100*
3600 diesel, 1976 (Excellent) 4900*
3000 diesel, 1972 (Excellent) 4250*
3000 diesel, 1970 (Excellent) 3800
3000 diesel, 1968 (Excellent) 3950
3000, 1968 (Good) 3200
3000 diesel, 1968 (Good) 3100*
3000 diesel, 1968 (Good) 2800
3000 diesel, 1968 (Good) 2950
3000 diesel, 1966 (Rough) 1750
3000, 1966 (Rough) 2100*
2600 diesel, 1976 (Excellent) 6400
2000 diesel, 1976 (Excellent) 4600*
2000, 1971 (Good) 3260
2000, 1964 (Excellent) 2300
2000, 1963 (Excellent) 2000
1900 diesel, 1979 (Excellent) 4000
1700 diesel, 1979 (Excellent) 4100
Maj. diesel, 1958 (Good) 875
Maj. diesel, 1956 (Fair) 650
950, 1956 (Good) 925
851, 1958 (Good) 2000
850, 1957 (Good) 2150
641, 1960 (Fair) 1075
641, 1959 (Good) 2000
640, 1956 (Good) 1950
Sup. Dexta, 1963 (Fair) 1050
Dexta, 1958 (Fair) 700
Jub., 1953 (Good) 2050
Jub., 1953 (Good) 2000
8N, 1951 (Good) 1150
8N, 1951 (Excellent) 1600*
8N, 1951 (Excellent) 1600
8N, 1950 (Excellent) 1600
8N, 1949 (Good) 1300*
8N, 1949 (Good) 1475
8N, 1949 (Excellent) 1575
8N, 1948 (Fair) 875
8N, 1948 (Good) 1300

INTERNATIONAL HARVESTER TRACTORS

1566 diesel, 1975 (Excellent) 7300
1486 diesel, duals, 1975 (Fair) 4600*
1066 diesel, 1975 (Fair) 5350*
1066 diesel, 1974 (Fair) 4000*
706 diesel, 1964 (Rough) 2275
574 diesel, 1972 (Good) 3550
574 diesel, 1972 (Good) 3500
574 diesel, 1971 (Fair) 2600*
544 diesel, 1968 (Fair) 2700*
B414 diesel, 1963 (Rough) 650
300, 1956 (Fair) 650
B250 diesel, (Fair) 1025
B250 diesel, (Rough) 675
Sup. A, 1950 (Excellent) 1400*
Sup. A, 1948 (Good) 1000
Sup. A, 1948 (Rough) 750
Cub, Lo Boy, 1958 (Rough) 425

JOHN DEERE TRACTORS

6030 diesel, 1974 (Rough) 4000
4840 diesel, cab, 1978 (Excellent) 26,600*
4430 diesel, duals, 1977 (Good) 7700*
4430 diesel, cab, 1975 (Good) 9000
4430 diesel, 1974 (Excellent) 10,900*
4230 diesel, cab, (Excellent) 11,600*
4230 diesel, 1977 (Good) 8400*
4030 diesel, 1975 (Good) 5600
4020 diesel, 1972 (Good) 6750*
4020 diesel, 1968 (Fair) 3450
4020 diesel, 1968 (Good) 4800*
4020 diesel, 1966 (Good) 4650*
3020 diesel, 1968 (Good) 5200
3010 diesel, 1962 (Rough) 900
3010 diesel, 1962 (Good) 2800
2840 diesel, 1978 (Good) 7600*
2640 diesel, 1977 (Excellent) 8300
2630 diesel, 1974 (Good) 6300*
2440 diesel, 1977 (Good) 5900*
2240 diesel, 1976 (Fair) 3300*
2130 diesel, (Good) 4100*
2130 diesel, (Good) 3800*
2010 diesel, 1964 (Fair) 1350
2010 diesel, 1961 (Rough) 750
2010 diesel, 1961 (Fair) 1450*
1120 diesel, (Fair) 2300
1120 diesel, (Fair) 2050*
1020 diesel, 1972 (Good) 3500
1020 diesel, 1972 (Good) 3300
1020 diesel, 1972 (Good) 3400*
1020 diesel, 1971 (Good) 3100*
1010, 1963 (Fair) 850*
850, (Good) 4700
830 diesel, 1975 (Good) 4400
40, 1954 (Good) 1550
40, 1954 (Rough) 625

KUBOTA TRACTORS

245 diesel, (Excellent) 3800
L175 diesel, (Good) 2000*

THE BIG FORECAST

Manufacturers see better unit sales for 1984 in almost all product groups, with strength continuing into 1985.

By Bill Fogarty

■FARM EQUIPMENT manufacturers are believers in 1984. As of the December polling of industry marketing executives by the Farm & Industrial Equipment Institute, the field equipment group (Farm Equipment Div.) sees a 10 per cent increase in retail sales. The Agri-Equipment Div. expects a 7 per cent improvement.

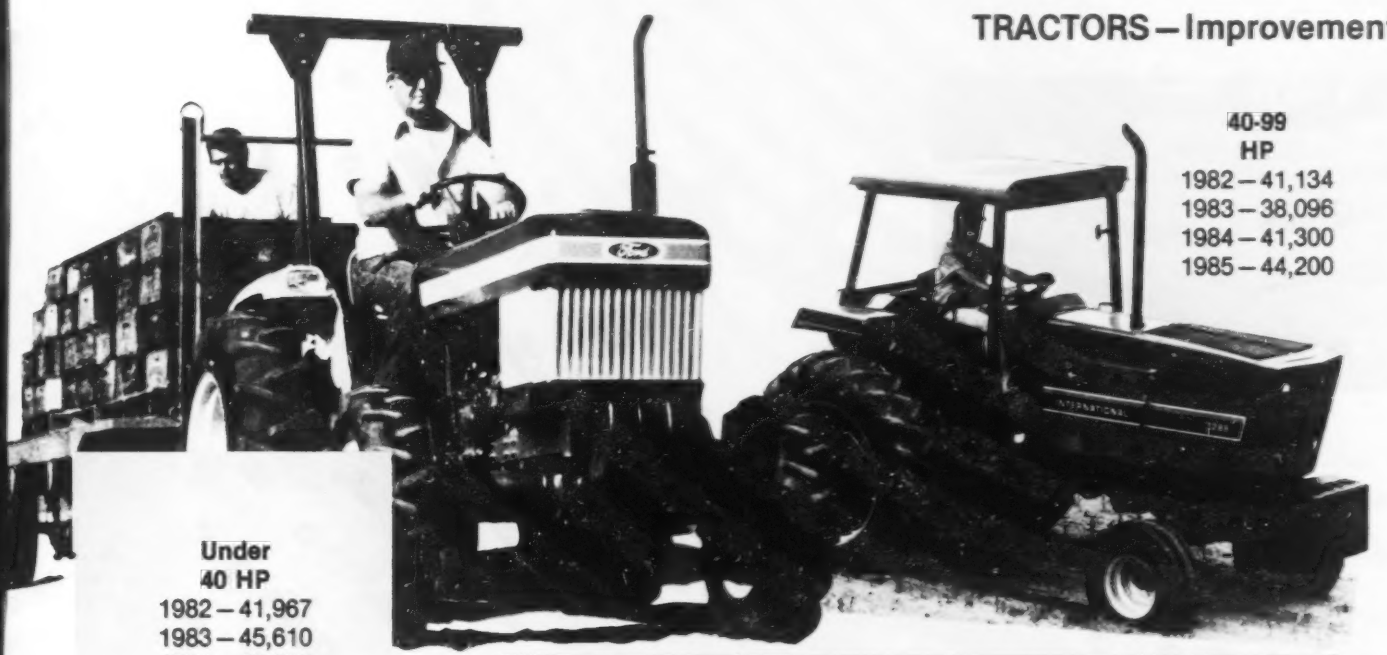
What may be more surprising is that the executives are coming on strong about 1985. A scanning of individual product outlooks shows that most items are expected to sell at a fast clip next year.

The 10 per cent increase seen in field equipment dollar volume is a median figure. There was a range of opinion running from minus 13 to plus 22 per cent change from 1983 sales volume. Only one participant saw a decline in volume and two saw no change. Fifty-one other executives saw increases of 2 to 22 per cent.

The reasons they gave for the improvement in 1983 were the ones that have become familiar among followers of the industry's fortunes. Typical comments:

"Pent-up demand after four years' decline"... "Better farmer financial condition—paid off more debts in '83 with PIK money"... "Better commodity prices, election year"..."Realized net income up"... "No dairy PIK—up only 3 per cent"..."PIK dollars overflowed into 1984"..."Stability in interest rates"..."Old equipment needs replacing"..."Up 22 per cent—changing tillage practices will encourage purchasing"..."Late '84 return to profitable livestock prices"..."Increased acreage, debt paydown in '83, financial community more supportive of equipment purchases..."

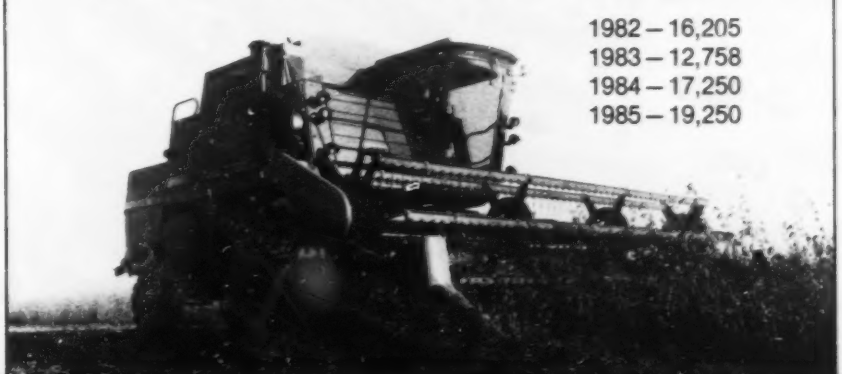
TRACTORS—Improvement



Under 40 HP
1982—41,967
1983—45,610
1984—46,300
1985—47,600

40-99 HP
1982—41,134
1983—38,096
1984—41,300
1985—44,200

COMBINES—Two-year rebound is seen



1982—16,205
1983—12,758
1984—17,250
1985—19,250

OF 1984-1985

How marketers foresee distribution changes

The questionnaire included this open-ender:

"Please comment on major changes you see occurring in marketing and distribution of farm equipment, given the detrimental economic impact on manufacturers and their dealers caused by the prolonged recession."

There were 46 brief essays in response to this. What follows is a synthesis of the most prevalent replies, but also some of the more interesting, too, regardless of prominence:

(More...)

About the State-of-the-Industry Survey

Each December, the Farm & Industrial Equipment Institute circulates a questionnaire among industry marketing executives, asking them to indicate the percentage of unit sales change, up or down, they expect in the coming year. They participate only in terms of the products with which they are involved; their estimates are expected to be oriented toward the total industry rather than their own companies. When the results are computed, a median percentage figure is used for each product or category. This percentage figure has been converted to unit numbers where available. An E after a unit figure, as in tractors under 40 horsepower and round balers, is I&T's estimate.

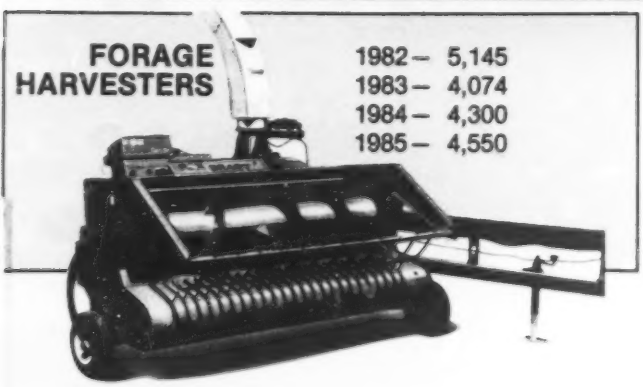
The State-of-the-Industry outlook is reported at the FIEI Marketing & Management Conference in late January. A second questionnaire is circulated in April and the outlook is updated at the spring meeting of the conference in May.

Jack Snead, vice-president of marketing at Sperry New Holland, served as reporter of the survey when the conference was held Jan. 30-31 at Tucson, Ariz. The next conference is set for May 17-18 at Oconomowoc, Wis.

in all categories expected for '84, '85

100 HP and Over
1982 – 29,247
1983 – 28,146
1984 – 31,500
1985 – 33,250

FORAGE HARVESTERS
1982 – 5,145
1983 – 4,074
1984 – 4,300
1985 – 4,550

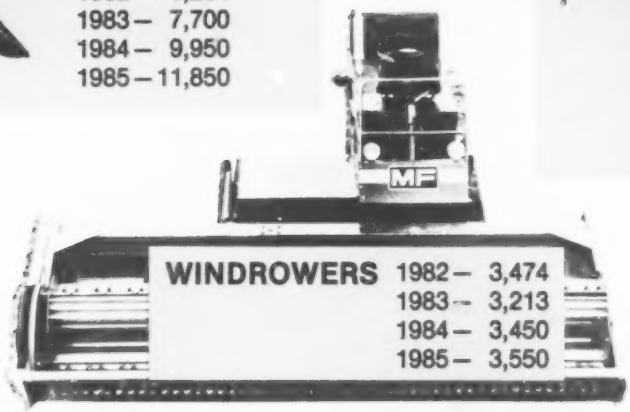


Four-Wheel Drive
1982 – 6,763
1983 – 5,052
1984 – 6,100
1985 – 6,500

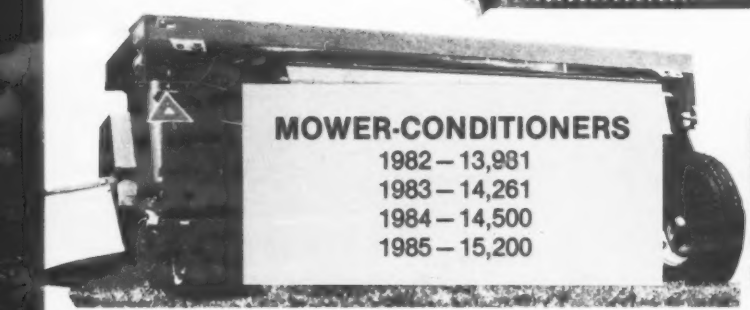
CORNHEADS
1982 – 9,294
1983 – 7,700
1984 – 9,950
1985 – 11,850

BALERS
(Bales under 200 lbs.)
1982 – 8,905
1983 – 9,039
1984 – 8,725
1985 – 8,750

The Forecast
(continued)



WINDROWERS 1982 – 3,474
1983 – 3,213
1984 – 3,450
1985 – 3,550



MOWER-CONDITIONERS
1982 – 13,981
1983 – 14,261
1984 – 14,500
1985 – 15,200

BALERS
(Bales over 200 lbs.)
1982 – 10,900E
1983 – 12,200E
1984 – 13,500
1985 – 14,600

• **"Improved quality** of servicing dealers, closer working relationships with their major and shortline manufacturers and distributors. Increased shortliner role. More 'jobbing out' of accessory products by majors to shortliners of highly price-sensitive products. Shorter terms, more competitive financial investment ratings."

• **"Fewer players,** more dualing at the dealer level (*i.e.*, combined franchising), more caution in stocking at dealer level. Reduction in services offered by many franchisers to dealers."

• **"In an attempt** to sell equipment to a more intelligent user, manufacturers will be making product design changes that are more ergonomical, more state-of-the-art (electronics/computers). However, unless more creative financing is used to give farmers an opportunity to invest in the product, sales will not rise."

• **"Due dates** on equipment will be less flexible. In the past, many dealers who couldn't pay simply extended their credit...."

• **"Continued efforts** at pre-selling equipment, greater conservatism of purchasers, selective selling to key product markets."

• **"Narrower product lines.** Firms keying on areas of expertise and profit potential – geographic and technological. Lower inventory level goals. Centralization of operation and distribution facilities. Standardization of options, manufacturing against orders, longer delivery times to order."

• **"More companies** will by-pass distributors and sell direct to dealers."

• **"Dealers who ceased** operations, voluntarily or not, in the recent recession will not be replaced in many cases. Distribution will remain with franchised dealers but will be serviced more by telemarketing representatives."

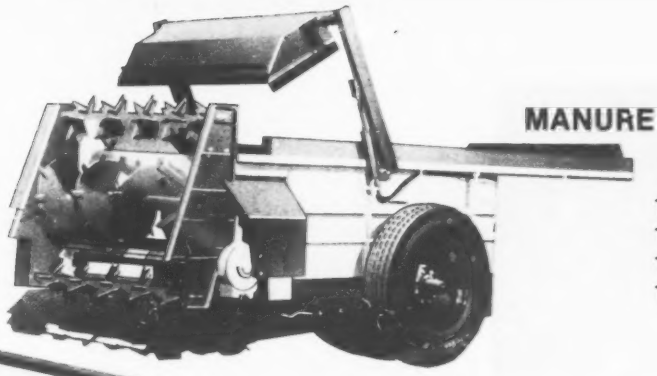
• **"Better literature** with more specs, fewer pretty pictures."

• **"There will be** a prolonged period of poor profit margins due to price cutting during the last three years. Watch for increased foreign penetration especially in low technology items."

• **"Dealers will carry** smaller inventories. More lucrative early-order

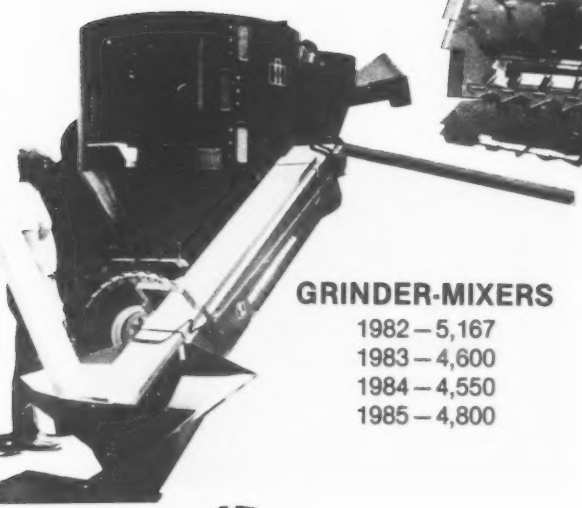
(More...)

The Forecast
(continued)



MANURE SPREADERS
(box type)

1982 – 11,201
1983 – 9,520
1984 – 9,900
1985 – 10,400

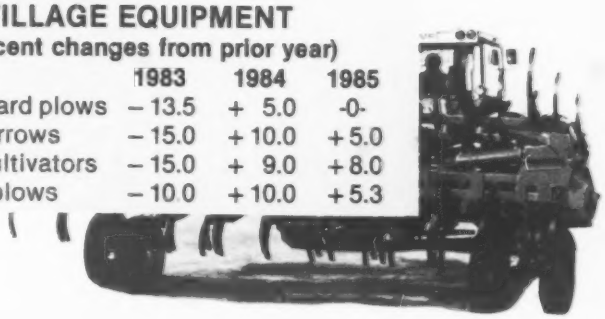


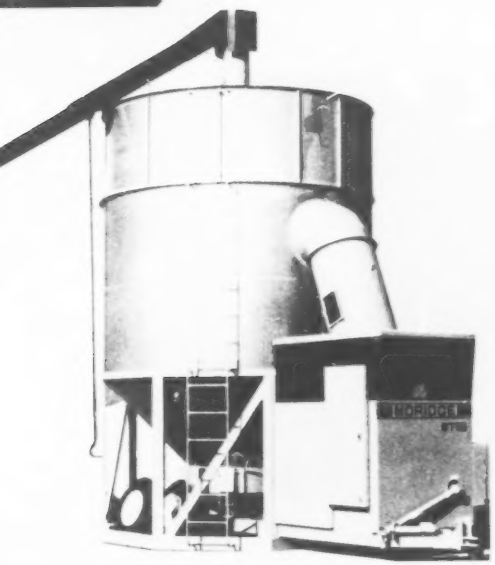
GRINDER-MIXERS

1982 – 5,167
1983 – 4,600
1984 – 4,550
1985 – 4,800

TILLAGE EQUIPMENT
(per cent changes from prior year)

	1983	1984	1985
Moldboard plows	– 13.5	+ 5.0	-0-
Disk harrows	– 15.0	+ 10.0	+ 5.0
Field cultivators	– 15.0	+ 9.0	+ 8.0
Chisel plows	– 10.0	+ 10.0	+ 5.3





AGRI-EQUIPMENT FORECASTS, 1984, 1985
(Per cent change, retail dollar volume)

	Pct. Change from Previous Year	
	1984	1985
Augers and elevators	+ 8.0	+ 5.0
Crop dryers, bin type	+ 5.0	+ 6.0
Dryers, batch, continuous flow	+ 15.0	+ 10.0
Dairy and beef equipment	+ 5.0	+ 5.0
Hog equipment	+ 4.0	+ 8.0
Grain bins	+ 5.0	+ 10.0
Chemical application equipment	+ 3.5	+ 5.0
Milking machines	+ 2.5	+ 5.0

programs will be used to get dealers to order and farmers to buy early."

• **"Buy-back laws** being written in most states will create havoc for the next few years, until tested or until the economy improves to where dealers will be able to pay on time."

• **"Price discounting** will decline as a sales tool and quality, reliability and service will be the primary factors influencing consumer purchasing decisions."

• **"Each company** will take a different path based on needs and goods and each will be different from past courses of marketing."

• **"There will be** a restoration of rationality! Floor plan financing that is justified by manufacturing cost decreases will exist. Irresponsible financing will end. Trend will be toward responsible decision-making ....The fat is gone for good!"

• **"The U.S.** is the only country in the world to restrict production. PIK was a disaster for America.... America should match any country in subsidies and move our surpluses (reverse PIK). Japan does a good job of exporting its unemployment. We have the opportunity to do the same with farm crops; we have the ability comparable to Japan's ability to fabricate."

• **"The group** most hurt and least likely to recover is the farm equipment distributor. More manufacturers are going direct to dealers, and in some cases farmers, to keep prices competitive, profits up."

• **"Manufacturers are slowly** acknowledging that equipment sales (units) will not return to the levels of the '70s. As a result, many manufacturers will, over the next few years, have to deal with a severe overcapacity problem. Dealers will continue to consolidate and more emphasis will be placed on satellite stores. Programs (terms) will be difficult to eliminate in the near term. Farmers won't give up any potential program benefits easily."